



Cluster Overview:	Pathway Options:	Occupation Examples:
Careers in the Agriculture, Food and Natural Resources cluster involve the planning, implementation, production, management, processing, and/or marketing of agricultural commodities and services.	<ul style="list-style-type: none"> Food Products and Processing Systems Plant Systems Animal Systems Power, Structural & Technical Systems Natural Resources Systems Environmental Service Systems Agribusiness Systems 	<p>Agricultural Chemical Dealer, Aquaculturalist, Environmental Compliance-Assurance Manager, Farm Manager, Health and Safety Sanitarian, Meat Cutter-Meat Grader, Park Manager, Produce Buyer, Recycling Technician, Wildlife Manager, Botanist, Agricultural Educator, Ecologist, Environmental Engineer, Fish and Game Officer, Bank Loan Officer, Plant Pathologist, Veterinarian</p> <p>For a complete listing, go to: http://online.onetcenter.org/find/career?c=4&q=Go</p>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Earth Science (lab science), Health Enhancement	<p>Cluster Foundation Courses: Ag Science I Ag Science II Intro to Natural Resources Information Technology</p> <p>Pathway Courses: Ag Science III Ag Science IV Wildlife Biology</p> <p>Student Organization(s): FFA</p> <p><i>Supervised Agricultural Experience (SAE) and participation in appropriate FFA activities support and reinforce classroom and laboratory learning and should be a requirement for all students.</i></p>
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College Prep	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College Prep	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses: CAPP 120 Computer Applications
Advanced Placement or IB courses:
Dual Enrollment:
Online Learning:
Other:

BI

MONTANA POSTSECONDARY OPPORTUNITIES

*Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>
Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>*

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT— Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City	Tribal Colleges: BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	Four Year Colleges/Universities: MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM— Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, and Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 	Agri- Mechanics Machinery/Technology--MSUN		
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	Farm Equipment Mechanics See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Agri-Business Technology -- MCC Agri- Mechanics Machinery/Technology -- DCC Livestock Technology -- DCC Natural Resource Management -- FVCC		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (<i>if prepared academically in math and English</i>) 	Agri-Business Technology -- DCC Agri-Business Technology -- Equitation -- DCC Agricultural Science/Technology--MSUN Agri-Mechanics Machinery/Technology -- MSUN, DCC Equine Studies -- UMW, MCC Natural Horsemanship -- UMW Natural Resource Management -- FVCC, BFCC		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Agriculture Business -- MSU Agriculture Education -- MSU Animal Science -- MSU Biotechnology -- MSU Environmental Horticulture -- MSU Environmental Sciences -- MSU Land Rehabilitation -- MSU Land Resource Sciences -- MSU Natural Resources & Rangeland Technology -- MSU Plant Science -- MSU Sustainable Food & Bio-energy Systems -- MSU Earth Sciences -- MSU Biological Sciences -- MSU Biology -- UM Environmental Studies -- UM Forestry -- UM Resource Conservation -- UM Wildland Restoration -- UM Wildlife Biology -- UM Environmental Engineering -- TECH Mining Engineering -- TECH Geological Engineering --TECH Environmental Science -- UMW, SKC Earth Science -- UMW Environmental Science & Forestry -- SKC		

Degree and Program Inventory above may not be all inclusive

B2

**Cluster Overview:**

Careers in the Architecture and Construction career cluster involve designing, planning, managing, building and maintaining the built environment.

Pathway Options:

- Design/Pre-Construction
- Construction
- Maintenance/Operations

Occupation Examples:

Architect, Construction Manager, Cost Estimator, Civil Engineer, Construction/ Building Inspector, Bricklayers, Carpenters, Electricians, Plumbers, Pipefitters, Sheet Metal workers, Heating/Ventilation/Air Conditioning workers, Construction workers

For a complete listing, go to:

<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>

For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Intro to the Built Environment Safety in the Workplace Technology Education
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Biology (lab science), Global Studies	Pathway Courses: Carpentry I, II Construction I, II Drafting I, II Metals I, II Welding I, II
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster or Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College Prep	English, U.S. History, Visual/Performing Arts	Student Organization(s): SkillsUSA TSA
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College Prep	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

CAPP 120 Computer Applications

CSTN 100, Fundamentals of Construction Technology

CSTN 120, Carpentry Basics and Rough-In Framing

WLDG 110, Welding Theory I and WLDG 111, Welding Theory I Practical

Dual Enrollment:**Online courses:****Other:**

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>
 Your Guide to Montana's Certificate and Associate Degree Programs <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City	Tribal Colleges: BFCC—Browning; CDKC—Lame Deer; FBCC—Hardy; FPCC—Poplar; LBHC—Crow Agency; FPCC—Fort Peck; SCC—Box Elder; SKC—Pablo; FBCOL—Fort Belknap	Four Year Colleges/Universities: MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM—Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, and Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 	Cabinet & Furniture Technology --FVCC Line Professional/Utility Line Worker—TEHCOT		
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	Bricklayers, Building Maintenance Workers, Carpenters, Cement Masons, Electricians, Glaziers, Plumbers, Pipefitters, Roofers, Sheet Metal Workers, Tile Setters See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Building Maintenance – UMCOT Building Technology & Trades –FVCC, MCC, FPCC, BFCC Carpentry--HCOT, UMCOT, TECH COT, GFCOT, MSUN, FBCOL Construction Technology--SCC Heating, Ventilation, Air Conditioning--FVCC Line Professional/Utility Line Worker -- FPCC Plumbing Technology--FVCC		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (if prepared academically in math and English) 	Building Technology & Trades –FVCC, MCC, FPCC Carpentry-- UMCOT, BLCOT, TECH COT, MSUN, FPCC Construction Technology--HCOT, BFCC Plumbing Technology--MSUN		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Civil Engineering -- TECH Construction Engineering Technology—MSU Environmental Design/Architecture—MSU		

Degree and Program Inventory above may not be all inclusive

B4



Cluster Overview:

Careers in the Arts, Audio/video Technology, and Communications career cluster involve designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

Pathway Options:

- Audio and Video Technology and Film
- Printing Technology
- Visual Arts
- Performing Arts
- Journalism and Broadcasting
- Telecommunications

Occupation Examples:

Art Director, Artist, Commercial Artist, Commercial Photographer: Digital, Still, Video, Film, Commercial/Residential and Home Furnishing Coordinator, Computer Animator, Curator and Gallery Manager, Fashion Designer, Fashion Illustrator, Graphic Designer, Illustrator, Interior Designer, Textile Designer

For a complete listing, go to:

<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>

For more information, talk to your school counselor

9 th	Graduation Requirements (Workforce/2 Year College)	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Introduction to the Arts, A/V Tech, and Communications Pathway Courses: Art Ceramics Creative Writing Graphic Design Interior Design Journalism Multimedia Music Photography Tech Theatre Theatre Arts Video Production
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements (Workforce/2 Year College)	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements (Workforce/2 Year College)	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements (Workforce/2 Year College)	English, Government	Student Organization(s): BPA SkillsUSA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses: CAPP 120 Computer Applications

Advanced Placement or IB courses:

Dual Enrollment:

Online learning:

Other:

B5

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginw/>
 Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		Community Colleges: DCC—Glendive; FVCC— Kalispell; MCC—Miles City	Tribal Colleges: BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	Four Year Colleges/Universities: MSU— Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM—Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 			
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	Communications Equipment Mechanics Jewelers Web Press Operators See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	3-D Jewelry Design -- FVCC Graphic Design -- FVCC Interior Design/Space Planning -- HCOT		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (if prepared academically in math and English) 	Goldsmithing & Jewelry Arts -- FVCC Graphic Design -- FVCC, GFCOT, MSUN Interior Design -- GFCOT, GCP Media Design/Information Technology -- SKC Music Technology—DCC		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Art -- UM, MSU, Billings Art/Graphic Design Option -- MSU Art/Studio Arts Option -- MSU Film & Photography -- MSU Music -- MSU, UM, UMW, MSUB Music Ed -- MSU Music Technology -- MSU Media Arts -- UM Journalism --UM Communication Studies -- UM Radio/TV---UM Professional /Technical Communication --TECH Visual Arts -- UMW		

Degree and Program Inventory above may not be all inclusive

B6

MONTANA CAREER CLUSTERS BIG SKY PATHWAYS



Cluster Overview:

Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.

Pathway Options:

- Administrative Support
- Business Information Management
- General Management
- Human Resources Management
- Operations Management

Occupation Examples:

Human resources manager, Administrative Assistant, Information Systems Manager, Management analyst, Marketing manager, Receptionist, Interviewer

For a complete listing, go to:
<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
 For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Introduction to Business Pathway Courses: Accounting I, II Business Finance Entrepreneurship Integrated Software Office Procedures Student Organization(s): BPA DECA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College Prep	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College Prep	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

ACTG 101, Accounting Procedures 1
 CAPP 120, Introduction to Computers
 CAPP 154, MS Word
 CAPP 154, MS Excel

Advanced Placement or IB courses:

Dual enrollment opportunities:

Online Learning:

Other:

B7

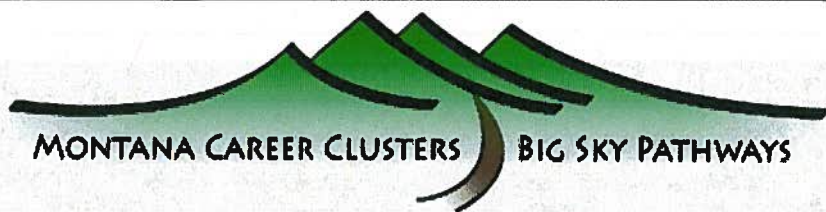
MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>
 Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology:		Community Colleges:	Tribal Colleges:	Four Year Colleges/Universities:
BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		DCC—Glendive; FVCC—Kalispell; MCC—Miles City	BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar, LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM—Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, , Marines, Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 	Business Administration – MCC Medical Receptionist—DCC Business Management/ Entrepreneurship—MCC Customer Service Relations – FVCC, MCC Human Resources Management – HCOT Medical Administrative Assistant – MCC		
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Administrative Assistant/Support --BLCOT, DCC, SKC, CDKC Business Administration -- FVCC Business Management/ Entrepreneurship—GFCOT, BFCC Business Technology -- FPCC Customer Service Relations – UMCOT, SCC Human Resources Management -- BLCOT Medical Office Technology – HCOT, SKC Receptionist – Medical/Dental – UMCOT, TECHCOT Small Business Management/Entrepreneurship – FVCC Tribal Management – FBCC		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (if prepared academically in math and English) 	Administrative Assistant/Support – HCOT, BLCOT, TECHCOT, DCC Administrative Management – UMCOT Business Administration – GFCOT, UMW, MSUN, FVCC, MCC Business Health Administration – TECHCOT Business Management/ Entrepreneurship – UMCOT, GFCOT, UMW, DCC, CDKC Business Technology – TECHCOT, FPCC, SKC Human Resources Management -- TECHCOT Executive/Legal Administrative Assistant -- HCOT Medical Administrative Assistant – HCOT, UMCOT, BLCOT, TECHCOT, DCC, FVCC Office Systems Technology – UMW, MCC Office Admin & Technology -- BFCC Small Business Management/Entrepreneurship – HCOT, FVCC, MCC, FPCC, BFCC		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Agribusiness—MSU Business Administration—MSUB, MSU, UMW, MSUN Business/Entrepreneurship—SKC Business & Information Tech --TECH		

Degree and Program Inventory above may not be all inclusive

B8



Overview:

Careers in the Education and Training Cluster involve planning, managing and providing education and training services, and related learning support services.

Pathway Options:

- Administration and Administrative Support
- Professional Support Services
- Teaching/Training

Occupation Examples:

Administrator, Assessment Specialist, Child Care Worker, Clinical Psychologist, Coach, Counselor, Principal, College/University Faculty, Curriculum Developer, Elementary Teacher, High School Teacher, Middle School Teacher, Speech-Language Pathologist

For a complete listing, go to:
<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
 For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Career Exploration in Education Pathway Courses: Early Childhood Education Child Development Human Growth & Development Psychology Student Organization(s): FCCLA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

CAPP 120, Introduction to Computers

Advanced Placement or IB courses:

Dual enrollment courses:

Online Learning:

Other:

B9

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginw/>
 Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP – Bozeman		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City		Tribal Colleges: BECC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder, SKC—Pablo		Four Year Colleges/Universities: MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM—Missoula; UMW—Dillon	
MILITARY	<ul style="list-style-type: none">• Requires diploma or GED• 17 with parental consent; 18 without			Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com			
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none">• Requires diploma or GED• Less than 30 credits; little/no general ed credits• Complete in one year or less			Paraprofessional Educator --MCC			
APPRENTICESHIP	<ul style="list-style-type: none">• Requires diploma or GED• Must be at least 18• Minimum 2,000 hours of supervised experience			See the MT Dept of Labor website for more information: http://mcis.dli.mt.gov/apprentice.asp			
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none">• Requires diploma or GED• 30-45 credits; limited general education credits• Complete in one year or less			Coaching – BFCC Early Childhood Education – UMW, DCC			
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none">• Requires diploma or GED• 60-72 credits; includes 15-25 general ed credits• Complete in two years (<i>if prepared academically in math and English</i>)			Education Studies—UMW Early Childhood Education—UMW, DCC, FVCC			
BACCALAUREATE DEGREE	<ul style="list-style-type: none">• Requires 4-year college prep for admission• 128 credits (approximately)• Complete in four years			Early Childhood Education—MSU, UMW, SKC Elementary Education—MSU, UM, MSUB, MSUN, UMW, SKC Secondary Education—MSU, UM, MSUB, MSUN, UMW Special Education—MSU, MSUB			

Degree and Program Inventory above may not be all inclusive

B10



Overview:

Jobs in the Finance career cluster involve providing services for financial and investment planning, banking insurance, and business financial management.

Pathway Options:

- Securities and Investments
- Business Finance
- Accounting
- Insurance
- Banking Services

Occupation Options:

Bookkeeper, Accounting Clerk, Accountant, Auditor, Teller, Financial Manager, Comptroller, Insurance Sales Agent, Actuary, Estate Planner, Financial Advisor, Chief Financial Officer

For a complete listing, go to:

<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Introduction to Business Accounting I, II Pathway Courses: Accounting III, IV Business Communication Business Finance Computerized Accounting Student Organization(s): BPA DECA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster or Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College Prep	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College Prep	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

ACTG 101, Accounting Procedures 1
CAPP 120, Introduction to Computers
CAPP 154, MS Excel

Advanced Placement or IB courses:

Dual enrollment courses:

Online courses:

Other:

B11

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~inus/drginv/>

Your Guide to Montana's Certificate and Associate Degree Programs: <http://inus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City	Tribal Colleges: BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	Four Year Colleges/Universities: MSU— Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM—Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits Little/no general ed credits Complete in one year or less 	Payroll Accounting—FVCC Bookkeeping—HCOT		
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits Limited general education credits Complete in one year or less 	Accounting—BLCOT, FVCC, FPCC, SCC Bookkeeping—HCOT, TECHCOT, GCP		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; Includes 15-25 general ed credits Complete in two years (<i>if prepared academically in math and English</i>) 	Accounting -- HCOT, UMCOT, BLCOT, TECHCOT, GFCOT, FVCC Accounting Technology—UMCOT		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Accounting—UM Business/Accounting option—MSU, MSUB Business/Accounting option—TECH Business/Finance option—MSU, MSUB		

Degree and Program Inventory above may not be all inclusive

B12



<p>Overview: Careers in the Government and Public Administration cluster involve executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels.</p>	<p>Pathway Options:</p> <ul style="list-style-type: none"> • Governance • National Security • Foreign Service • Planning • Revenue and Taxation • Regulation • Public Management and Administration 	<p>Occupation Examples:</p> <p>Urban and Regional Planner, Economic Developer, Congressional Aide, Intelligence Agent, Lobbyist, Legislator, Policy Advisor</p> <p>For a complete listing, go to: http://online.onetcenter.org/find/career?c=4&q=Go</p>
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SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
For more information, talk to your school counselor

9 th	Graduation Requirements 2-Year College Prep	English, Math, Earth Science (lab science), Health Enhancement	<p>Cluster Foundation Courses: Information Technology Introduction to Business</p> <p>Pathway Courses: Economics Accounting I, II Statistics</p> <p>Student Organization(s): Business Professionals of America DECA</p>
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements 2-Year College Prep	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster or Pathway Courses	
11 th	Graduation Requirements 2-Year College Prep	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements 2-Year College Prep	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

<p>CTE START courses: CAPP 120, Introduction to Computers</p>
<p>Advanced Placement or IB courses:</p>
<p>Dual Enrollment:</p>
<p>Online courses:</p>
<p>Other:</p>

B13

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>
 Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City	Tribal Colleges: BFCC— Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC— Box Elder; SKC—Pablo	Four Year Colleges/Universities: MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM— Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> • Requires diploma or GED • 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> • Requires diploma or GED • Less than 30 credits; little/no general ed credits • Complete in one year or less 			
APPRENTICESHIP	<ul style="list-style-type: none"> • Requires diploma or GED • Must be at least 18 • Minimum 2,000 hours of supervised experience 	See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> • Requires diploma or GED • 30-45 credits; limited general education credits • Complete in one year or less 	Business Administration—FVCC Native American Studies—SKC		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> • Requires diploma or GED • 60-72 credits; includes 15-25 general ed credits • Complete in two years (<i>if prepared academically in math and English</i>) 	Business Administration—FVCC, MSUGF, MSUN, UMW, MCC		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> • Requires 4-year college prep for admission • 128 credits (approximately) • Complete in four years 	Business Administration—MSUN, MSUB, UMW Community & Environmental Planning—UM Mass Communications—MSUB Native American Studies—UM Political Science/Policy Analysis—MSU Political Science/Public Administration option—UM Public Relations—MSUB		

B14



Overview:	Pathway Options:	Occupation Examples:
Careers in Health Science involve planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.	<ul style="list-style-type: none"> Diagnostic Services Therapeutic Services Health Informatics Support Services Biotechnology Research and Development 	<p>Athletic Trainer, Certified Nursing Assistant, Clinical Medical Assistant, Dental Assistant/Hygienist, Dental Lab Technician, EMT/Paramedic, Home Health Aide, Licensed Practical Nurse, Massage Therapist, Pharmacist/Pharmacy Technician, Physical Therapist/Assistant, Radiologic Technician, Registered Nurse, Respiratory Therapist, Audiologist, Chiropractor, Dentist, Dietician, Exercise Physiologist, Nurse Practitioner, Occupational Therapist, Optometrist, Physician (MD/DO), Physician's Assistant, Surgical Tech, Speech Language Pathologist, Mammographer, Nuclear Medicine Technologist, Medical Librarian/Cybrarian, Radiologist, Phlebotomist, Medical Technologist/Clinical, Laboratory Scientist, Nutritionist, Pathologist, Veterinarian</p> <p>For a complete listing, go to: http://online.onetcenter.org/find/career?c=4&q=Go</p>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
 For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Introduction to Health Sciences Pathway Courses: AP Biology Anatomy Medical Terminology Microbiology CNA Student Organization(s): HOSA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

CAPP 120, Introduction to Computers

Advanced Placement or IB courses:

Dual enrollment courses:

Online courses:

Other:

B15

MONTANA POSTSECONDARY OPPORTUNITIES

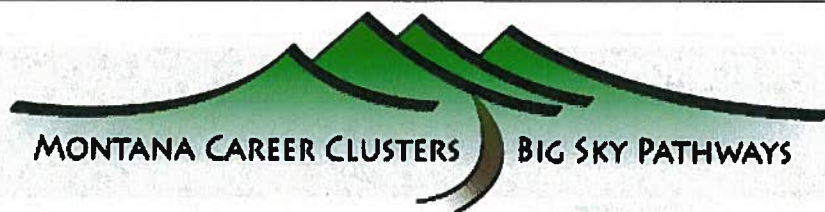
Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginw/>

Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology:		Community Colleges:	Tribal Colleges:	Four Year Colleges/Universities:
BLCOT—Billings; GECOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		DCC—Glendive; FVCC—Kalispell; MCC—Miles City	BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM—Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 	Certified Nursing Assistant – TECHCOT, DCC, MCC Diagnostic Medical Sonography – TECHCOT Health Informatics Tech – GFCOT Pharmacy Technology – FVCC, GFCOT Medical Receptionist—MCC		
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	Pharmacy Technician Respiratory Therapist See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits Limited general education credits Complete in one year or less 	Dental Assistant -- GFCOT, SKC EMT/Paramedic—GFCOT Health Information Coding Specialist -- GFCOT, FVCC Medical Billing Specialist -- GFCOT Medical Transcription – GFCOT, FVCC Medical Billing & Coding -- BLCOT Nursing – Practical – HCOT Pharmacy Technology -- MCOT		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (if prepared academically in math and English) 	Dental Assistant -- SKC Dental Hygiene—GFCOT EMT/Paramedic—GFCOT, BLCOT, FVCC Health Information Coding Specialist -- UMCOT Health Information Technology – GFCOT Medical Assistant -- GFCOT, TECHCOT, FVCC Medical Transcription -- GFCOT Medical Billing & Coding -- GFCOT Nursing –Practical – UMCOT, BLCOT, GFCOT, FVCC Nursing (RN) – HCOT, UMCOT, BLCOT, MSUN, MCC, SKC Physical Therapist Asst – GFCOT Radiologic Technology -- MCOT, BLCOT, GFCOT, TECHCOT, FVCC Respiratory Care -- GFCOT, MCOT Surgical Technology—FVCC, GFCOT, MCOT, BLCOT, TECHCOT		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Athletic Training – UM Communicative Disorders—UM Food & Nutrition – MSU Health & Human Performance – MSU, UM Health Care Informatics—TECH Medical Technology --UM Nursing-- MSU, MSUN, SKC Occupational Safety and Health—TECH Pre-Med—MSU		

Degree and Program Inventory above may not be all inclusive

B16



Overview:

Jobs in the Hospitality and Tourism career cluster involve planning, managing, and providing lodging, food, recreation, conventions, and tourism, and related planning and support services such as travel-related services.

Pathway Options:

- Lodging
- Recreation, Amusements and Attractions
- Restaurants and Food/Beverage Services
- Travel and Tourism

Occupation Examples:

Baker, Bartender, Casino Manager, Caterer, Concierge, Convention Services Manager, Director of Operations – Lodging, Director of Tourism Development, Event Planner, Executive Chef, Facilities Manager, Maitre d', Museum Director, Reservations Manager, Restaurant Owner/Manager, Sports Promoter, Theme Park Manager, Tour and Travel Guide, Travel Agent, Wine Steward

For a complete listing, go to:

<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Introduction to Business Intro to Family & Consumer Sciences Intro to Hospitality and Tourism Foods and Nutrition
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College	English, Math, Biology (lab science), Global Studies	Pathway Courses: Accounting I, II Culinary/Pro-Start I, II, III Entrepreneurship Marketing I, II Pro-Start Internship
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College	English, U.S. History, Visual/Performing Arts	Student Organization(s): BPA DECA FCCLA
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

ACTG 101, Accounting Procedures 1

CAPP 120, Introduction to Computers

Advanced Placement or IB courses:

Dual enrollment courses:

Online courses:

Other:

B17

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>
 Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City	Tribal Colleges: BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC— Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	Four Year Colleges/Universities: MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM— Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 			
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	Bakers, Chefs Dinner Cooks See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Culinary Arts—MCOT Hospitality Management -- BFCC		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general education credits Complete in two years (<i>if prepared academically in math and English</i>) 	Culinary Arts -- FVCC Hospitality Management -- BFCC Food Service Management -- MCOT Small Business Entrepreneurship Technology—HCOT		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Recreation Management/Nature-Based Tourism -- UM		

Degree and Program Inventory above may not be all inclusive

B18



Overview:

Jobs in the human services career cluster involve tending to families and to human needs.

Pathway Options:

- Early Childhood Development and Services
- Counseling and Mental Health Services
- Family and Community Services
- Personal Care Services
- Consumer Services

Occupation Examples:

Community Service Director, Consumer Advocate, Cosmetologist, Director of Childcare Facility, Personal Trainer, Social Worker

For a complete listing, go to:

<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Intro to Family & Consumer Science Pathway Courses: Human Growth & Development Personal /Family Finance Psychology Sociology Entrepreneurship Street/Business Law Student Organization(s): FCCLA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College Prep	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College Prep	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

CAPP 120, Introduction to Computers

Advanced Placement or IB courses:

Dual enrollment courses:

Online courses:

Other:

B19

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginw/>
 Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City	Tribal Colleges: BFCC—Browning; CDKC— Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC— Pablo	Four Year Colleges/Universities: MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM— Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 	Gerontology – FVCC		
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Gerontology – BFCC Personal Trainer – FVCC, SCC Early Childhood Education—DCC		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (<i>if prepared academically in math and English</i>) 	Human Services -- DCC, FVCC Substance Abuse Counseling – FVCC, BLMSU, DCC, BFCC, SCC Early Childhood Education—UMW, DCC Education Studies—UMW		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Communication & Human Relationships—UM Community Health—MSU Early Childhood Education—MSU, UMW Family & Consumer Sciences—MSU Psychology—UM, MSU Social Work—UM, SKC Sociology—MSU		

Degree and Program Inventory above may not be all inclusive

B20



Overview:

Information Technology careers encompass entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services.

Pathway Options:

- Network Systems
- Information Support and Services
- Web and Digital Communications
- Programming and Software Development

Occupation Examples:

Animator, Database Administrator, Data Systems Designer, E-Business Specialist, Game Developer, Information Technology Engineer Media Specialist, Network Administrator, Network Security Analyst, PC Support Specialist, Programmer, Software Applications Specialist, Systems Administrator, Telecommunications Network Technician, User Support Specialist, Virtual Reality Specialist, Web Architect/Designer

For a complete listing, go to:
<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
 For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Introduction to Business Pathway Courses: Cisco I, II Computer Programming I, II Software Applications I, II Web Design I, II Oracle Academy Student Organization(s): BPA SkillsUSA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES High School to College/Career Linkages

CTE START courses:

CAPP 120, Introduction to Computers
 CAPP 154, MS Word
 CAPP 154, MS Excel

ITS 140 CISCO CCNA: Discovery 1
 ITS 142 CISCO CCNA: Discovery 2
 ITS 150 CISCO CCNA: Exploration 1
 ITS 152 CISCO CCNA: Exploration 2

Advanced Placement or IB courses:

Dual enrollment courses:

Online courses:

Other:

B21

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>
 Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City	Tribal Colleges: BFCC—Browning; CDKC— Lame-Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC— Pablo	Four Year Colleges/Universities: MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM— Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 			
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Computer Assistant -- HCOT, TECHCOT, GFCOT Computer Desktop/Network Support -- FPCC Computer Networking -- BLCOT, TECHCOT, GFCOT, UMW Computer Science/Technology --BFCC Computer Skills Specialist -- HCOT Computer Support -- UMCOT Programming Technology -- FPCC Web Technology/Development/Design -- DCC		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (<i>if prepared academically in math and English</i>) 	Computer Desktop/Network Support -- BLCOT, SKC Computer Graphics -- MCC Computer Information Systems -- UMCOT, MSUN, Computer Networking -- HCOT, UMCOT, TECHCOT, GFCOT, MCC, FPCC Computer Science/Technology -- FPCC, BFCC Computer Systems Tech -- BLCOT Computer Technical Support Specialist -- DCC Information Technology/Systems -- FVCC Microcomputer Specialist/Technology -- GFCOT Programming Technology -- HCOT, BLCOT Web Technology/Development/Design -- HCOT, TECHCOT, GFCOT, FVCC		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Computer Engineering—MSU, SKC Network Technology -- TECH Computer Science—MSU, UM Computer Info Systems—MSUN Information Systems—UM Information Technology—SKC		

Degree and Program Inventory above may not be all inclusive

B22



Overview:

Planning, preparing and managing legal, public services, protective services, and homeland security, including professional, technical and support services.

Pathway Options:

- Correction Services
- Emergency and Fire Management Services
- Security and Protective Services
- Law Enforcement Services
- Legal Services

Occupation Examples:

Firefighter, Judge, Lawyer, Paralegal, Police Officer, Forest Fire Fighter, Probation and Parole Officer, Security Guard

For a complete listing, go to:

<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>

For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Pathway Courses: Business Law Psychology Sociology Student Organization(s):
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College Prep	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College Prep	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

CAPP 120, Introduction to Computers

Advanced Placement or IB courses:

Dual enrollment courses:

Online courses:

Other:

B23

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>
 Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP – Bozeman		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City		Tribal Colleges: BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo		Four Year Colleges/Universities: MSU— Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM—Missoula; UMW—Dillon	
MILITARY	<ul style="list-style-type: none">Requires diploma or GED17 with parental consent; 18 without			Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com			
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none">Requires diploma or GEDLess than 30 credits; little/no general ed creditsComplete in one year or less			Public Safety Communications -- GFCOT			
APPRENTICESHIP	<ul style="list-style-type: none">Requires diploma or GEDMust be at least 18Minimum 2,000 hours of supervised experience			See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp			
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none">1. Requires diploma or GED30-45 credits; limited general education creditsComplete in one year or less			Correctional Officer – DCC Tribal Legal Studies -- BFCC			
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none">Requires diploma or GED60-72 credits; includes 15-25 general ed creditsComplete in two years (<i>if prepared academically in math and English</i>)			Criminal Justice -- DCC, FVCC Criminal Justice Peace Officer -- DCC Criminal Justice Private Security -- DCC Fire and Rescue Technology HCOT, GFCOT Paralegal Studies—UMCOT			
BACCALAUREATE DEGREE	<ul style="list-style-type: none">Requires 4-year college prep for admission128 credits (approximately)Complete in four years			Criminal Justice—MSUB Sociology/Criminology Option—UM			

Degree and Program Inventory above may not be all inclusive

B24



Cluster Overview:

Jobs in the manufacturing career cluster involve planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities, such as production planning and control, maintenance, and manufacturing/process engineering.

Pathway Options:

- Production
- Manufacturing & Production Process Development
- Maintenance, Installation and Repair
- Quality Assurance
- Logistics and Inventory Control
- Health, Safety and Environmental Assurance

Occupation Examples:

Assembler, MIG Welder, TIG Welder, Machine Operator, Sheet Metal Worker, Mechanical Engineer, Industrial Engineer, Quality Control Technician, Safety Technician, Safety Engineer, Dispatcher, Production Manager, Purchasing Agent, Logistician

For a complete listing, go to:
<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
 For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Safety in the Workplace Pathway Courses: Metals I, II Welding I, II Student Organization(s): SkillsUSA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College Prep	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College Prep	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College Prep	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

CAPP 120, Introduction to Computers
 WLDG 110, Welding Theory I
 WLDG 111, Welding Theory I Practical

Advanced Placement or IB courses:

Dual enrollment courses:

Online courses:

Other:

B25

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>
 Your Guide to Montana's Certificate and Associate Degree Programs <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City	Tribal Colleges: BFCC—Browning; CDKC— Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC— Pablo	Four Year Colleges/Universities: MSU— Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM—Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general education credits Complete in one year or less 	Welding Technology—FVCC		
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	Electricians Sheet Metal Workers See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Industrial Machine Technology/CNC -- FVCC Metals (Fabrication) Technology -- BLCOT Machine Tool Technology -- HCOT, UMW Sustainable Energy Technician -- BLCOT, TECHCOT, GFCOT, MSUN Water Quality Technology -- HCOT, MSUN Welding Technology—HCOT, UMCOT, GFCOT, BLCOT, GCP, MSUN, DCC, FVCC, FPCC		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general education credits Complete in two years (if prepared academically in math and English) 	Biofuel Energy -- MCC Electronics Technology -- UMCOT Energy Technology—UMCOT Metals (Fabrication) Technology—HCOT, TECHCOT, BLCOT Machine Tool Technology -- HCOT Power Plant Technology -- BLCOT Process Plant Technology -- BLCOT Sustainable Energy Technician -- BLCOT, TECHCOT, GFCOT, MSUN Water Quality Technology -- FPCC Welding Technology—HCOT, UMCOT, BLCOT, FVCC		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Bioengineering -- MSU Electrical Engineering -- TECH, MSU Civil Engineering -- TECH, MSU Industrial Engineering—MSU Mechanical Engineering -- TECH, MSU Mining Engineering -- TECH Occupational Safety & Health -- TECH Welding Engineering -- TECH Metallurgical & Materials Engineering -- TECH Petroleum Engineering -- TECH		

Degree and Program Inventory above may not be all inclusive

B26



Overview:

Careers in the Marketing cluster involve planning, managing, and performing marketing activities to reach organizational objectives.

Pathway Options:

- Marketing Management
- Professional Sales
- Merchandising
- Marketing Communications
- Marketing Research

Occupation Examples:

Advertising Manager, Advertising Agent, Merchandise Buyer, Public Relations Specialist or Writer, Media/Event Planner, Sales Manager, Entrepreneur, e-Sales Specialist, Sales Representative, Real Estate Agent, Marketing Research Analyst, Economist

For a complete listing, go to:

<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Introduction to Business Pathway Courses: Marketing I, II Business Communication Business Finance Accounting I, II Web Design Student Organization(s): BPA DECA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

ACTG 101, Accounting Procedures 1
CAPP 120, Introduction to Computers

Advanced Placement or IB courses:

Dual enrollment courses:

Online courses:

Other:

B27

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>
 Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology: BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman		Community Colleges: DCC—Glendive; FVCC—Kalispell; MCC—Miles City	Tribal Colleges: BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	Four Year Colleges/Universities: MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM—Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com		
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 	Marketing/Sales -- FVCC, DCC		
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	Parts Salespeople Real Estate Appraisers See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp		
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Ag Marketing & Financial Analysis—DCC Sales & Marketing—UMCOT, DCC		
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (<i>if prepared academically in math and English</i>) 	Sales & Marketing -- UMCOT		
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Business/Marketing option -- MSU, MSUB Marketing -- UM		

Degree and Program Inventory above may not be all inclusive

B28



Cluster-Overview:

Jobs in the Science, Technology, Engineering and Mathematics career cluster involve planning, managing, and providing scientific research and professional technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.

Pathway Options:

- Engineering and Technology
- Science and Math

Occupation Examples:

Engineers (all), Chemist, Astrophysicist, Botanist, Geologist, Mathematician, Physicist, Economist, Lab Tech, Scientist, Statistician

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Pathway Courses: Calculus Chemistry Economics Introduction to Engineering Design Physics Principles of Engineering Statistics Student Organization(s): BPA DECA SkillsUSA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

CAPP 120, Introduction to Computers

Advanced Placement or IB courses:

Dual enrollment courses:

Online courses:

Other:

B29

MONTANA POSTSECONDARY OPPORTUNITIES

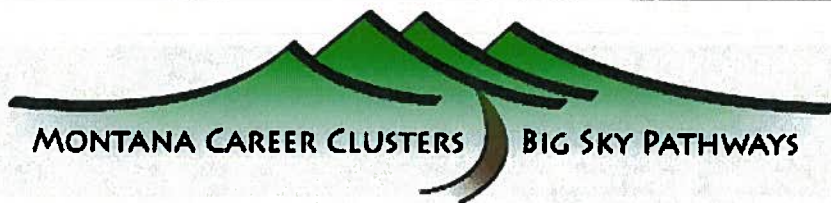
Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>

Your Guide to Montana's Certificate and Associate Degree Programs <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology:			Community Colleges:	Tribal Colleges:	Four Year Colleges/Universities:
BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman			DCC—Glendive; FVCC—KalisPELL; MCC—Miles City	BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM— Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com			
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 	Drafting Technology/Technician – HCOT Land Surveying -- MSUN			
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp			
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Computer Aided Design -- UMCOT Drafting Technology/Technician – BLCOT, TECHCOT Electrical Technology – FVCC Geographic Information Systems – BFCC			
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (<i>if prepared academically in math and English</i>) 	Civil Engineering Technology – TECHCOT, MSUN Drafting Technology/Technician – BLCOT, TECHCOT, GCP, MSUN Electrical Technology – MSUN, FVCC Engineering Technology – DCC Hazardous Material/Waste Mgmt Tech – FPCC Land Surveying -- FVCC			
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Astronomy—UM Anthropology -- UM Chemistry—MSU, U M, TECH, MSUB Chemical Engineering—MSU Civil Engineering—MSU, TECH Computer Engineering—MSU Economics—MSU, UM Electrical Engineering—MSU, TECH Environmental Engineering—TECH Geology/Earth Science -- MSU Geoscience--UM Industrial Engineering -- MSU Mathematical Sciences—TECH Mechanical Engineering -- MSU, TECH Medical Technology -- UM Metallurgical Engineering -- TECH Microbiology/Medical Lab Science -- MSU Petroleum Engineering -- TECH Physics -- MSU, UM Software Engineering --TECH			

Degree and Program Inventory above may not be all inclusive

B30



Cluster Overview:

Jobs in the Transportation, Distribution, and Logistics career cluster involve the planning, management, and movement of people, materials, and goods by road, air, rail, and water, as well as related professional and technical support services such as transportation infrastructure planning and management; logistics services; and mobile equipment and facility maintenance.

Pathway Options:

- Transportation Operations
- Logistics Planning and Management Services
- Warehousing & Distribution Center Operations
- Facility and Mobile Equipment Maintenance
- Transportation Systems/Infrastructure Planning, Management and Regulation
- Health, Safety and Environmental Management

Occupation Examples:

Dispatchers, Aircraft Mechanic, Airline Pilots, Air Traffic Controllers, Bus Drivers, Diesel Mechanics, Truck Drivers, Locomotive Engineers, Cargo and Freight Agents, Mass Transit Transportation Managers, Shipping and Receiving Clerks

For a complete listing, go to:

<http://online.onetcenter.org/find/career?c=4&q=Go>

SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>
For more information, talk to your school counselor

9 th	Graduation Requirements Workforce/2-Year College	English, Math, Earth Science (lab science), Health Enhancement	Cluster Foundation Courses: Information Technology Safety in the Workplace Pathway Courses: Auto Tech I, II Introduction to Business Welding I, II Student Organization(s): SkillsUSA
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster Foundation Courses	
10 th	Graduation Requirements Workforce/2-Year College	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Cluster/Pathway Courses	
11 th	Graduation Requirements Workforce/2-Year College	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	
12 th	Graduation Requirements Workforce/2-Year College	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	Career-Related Electives	Pathway Courses	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

CTE START courses:

CAPP 120, Introduction to Computers
WLDG 110, Welding Theory 1
WLDG 111, Welding Theory Practical

Advanced Placement or IB courses:

Dual enrollment opportunities:

Online courses:

Other:

B31

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>

Your Guide to Montana's Certificate and Associate Degree Programs <http://mus.edu/twoyear/YourGuide.html>

Colleges of Technology:			Community Colleges:	Tribal Colleges:	Four Year Colleges/Universities:
BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula; GCP—Bozeman			DCC—Glendive; FVCC—Kalispell; MCC—Miles City	BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM—Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: http://todaysmilitary.com			
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 	Automotive Technology -- FVCC Truck Driving -- MCC			
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	Aircraft Mechanics, Avionics Technicians, Bus and Truck Mechanics, Diesel Engine Mechanics, Heavy Equipment Mechanics, Material Coordinators/Shipping & Receiving Clerks See the MT Dept of Labor website for more information: http://mcis.dli.mt.gov/apprentice.asp			
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Automotive Collision & Refinishing -- BLCOT, GFCOT Automotive Technology -- TECHCOT, MSUN, BLCOT, MCC, FPCC Diesel Equipment/Technology -- BLCOT Heavy Equipment Operation -- UMCOT, FVCC, MCC, FPCC, BFCC Highway Construction Worker -- SKC Recreational Power Equipment -- UMCOT Truck Driving -- FPCC			
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (if prepared academically in math and English) 	Automotive Collision & Refinishing -- BLCOT Automotive Technology -- HCOT, BLCOT, MSUN, MCC, FPCC Aviation -- GCP Aviation Maintenance -- HCOT Diesel Equipment/Technology -- BLCOT, HCOT, UMCOT, MSUN			
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Diesel Technology--MSUN			

Degree and Program Inventory above may not be all inclusive

B32